

## SEQUENCE LISTING

<110> Reiner, Peter B.  
 Connop, Bruce P.  
 Pollard, Michelle

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<141> 2002-02-08

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		355					360					365			
Glu	Glu	Thr	Ile	Ser	Ala	Met	Lys	Thr	Val	Arg	Ser	Phe	Ala	Asn	Glu
	370					375					380				
Glu	Glu	Glu	Ala	Glu	Val	Tyr	Leu	Arg	Lys	Leu	Gln	Gln	Val	Tyr	Lys
385					390					395					400
Leu	Asn	Arg	Lys	Glu	Ala	Ala	Ala	Tyr	Met	Tyr	Tyr	Val	Trp	Gly	Ser
				405					410						415
Gly	Leu	Thr	Leu	Leu	Val	Val	Gln	Val	Ser	Ile	Leu	Tyr	Tyr	Gly	Gly
			420					425						430	
His	Leu	Val	Ile	Ser	Gly	Gln	Met	Thr	Ser	Gly	Asn	Leu	Ile	Ala	Phe
	435						440					445			
Ile	Ile	Tyr	Glu	Phe	Val	Leu	Gly	Asp	Cys	Met	Glu	Ser	Val	Gly	Ser
	450					455					460				
Val	Tyr	Ser	Gly	Leu	Met	Gln	Gly	Val	Gly	Ala	Ala	Glu	Lys	Val	Phe
465					470					475					480
Glu	Phe	Ile	Asp	Arg	Gln	Pro	Thr	Met	Val	His	Asp	Gly	Ser	Leu	Ala
				485					490						495
Pro	Asp	His	Leu	Glu	Gly	Arg	Val	Asp	Phe	Glu	Asn	Val	Thr	Phe	Thr
			500					505						510	
Tyr	Arg	Thr	Arg	Pro	His	Thr	Gln	Val	Leu	Gln	Asn	Val	Ser	Phe	Ser
		515					520							525	
Leu	Ser	Pro	Gly	Lys	Val	Thr	Ala	Leu	Val	Gly	Pro	Ser	Gly	Ser	Gly
	530					535					540				
Lys	Ser	Ser	Cys	Val	Asn	Ile	Leu	Glu	Asn	Phe	Tyr	Pro	Leu	Glu	Gly
545					550					555					560
Gly	Arg	Val	Leu	Leu	Asp	Gly	Lys	Pro	Ile	Ser	Ala	Tyr	Asp	His	Lys
				565					570						575
Tyr	Leu	His	Arg	Val	Ile	Ser	Leu	Val	Ser	Gln	Glu	Pro	Val	Leu	Phe
			580					585						590	
Ala	Arg	Ser	Ile	Thr	Asp	Asn	Ile	Ser	Tyr	Gly	Leu	Pro	Thr	Val	Pro
		595					600							605	
Phe	Glu	Met	Val	Val	Glu	Ala	Ala	Gln	Lys	Ala	Asn	Ala	His	Gly	Phe
	610					615					620				
Ile	Met	Glu	Leu	Gln	Asp	Gly	Tyr	Ser	Thr	Glu	Thr	Gly	Glu	Lys	Gly
625					630					635					640
Ala	Gln	Leu	Ser	Gly	Gly	Gln	Lys	Gln	Arg	Val	Ala	Met	Ala	Arg	Ala
				645					650						655
Leu	Val	Arg	Asn	Pro	Pro	Val	Leu	Ile	Leu	Asp	Glu	Ala	Thr	Ser	Ala
			660					665						670	
Leu	Asp	Ala	Glu	Ser	Glu	Tyr	Leu	Ile	Gln	Gln	Ala	Ile	His	Gly	Asn
		675					680							685	
Leu	Gln	Lys	His	Thr	Val	Leu	Ile	Ile	Ala	His	Arg	Leu	Ser	Thr	Val
	690					695								700	
Glu	His	Ala	His	Leu	Ile	Val	Val	Leu	Asp	Lys	Gly	Arg	Val	Val	Gln
705					710					715					720
Gln	Gly	Thr	His	Gln	Gln	Leu	Leu	Ala	Gln	Gly	Gly	Leu	Tyr	Ala	Lys
				725					730						735

Leu Val Gln Arg Gln Met Leu Gly Leu Gln Pro Ala Ala Asp Phe Thr  
                   740                  745                  750  
 Ala Gly His Asn Glu Pro Val Ala Asn Gly Ser His Lys Ala  
                   755                  760                  765

<210> 7  
 <211> 1280  
 <212> PRT  
 <213> Homo sapiens

<400> 7

Met Asp Leu Glu Gly Asp Arg Asn Gly Gly Ala Lys Lys Lys Asn Phe  
 1                  5                  10                  15  
 Phe Lys Leu Asn Asn Lys Ser Glu Lys Asp Lys Lys Glu Lys Lys Pro  
                   20                  25                  30  
 Thr Val Ser Val Phe Ser Met Phe Arg Tyr Ser Asn Trp Leu Asp Lys  
                   35                  40                  45  
 Leu Tyr Met Val Val Gly Thr Leu Ala Ala Ile Ile His Gly Ala Gly  
 50                  55                  60  
 Leu Pro Leu Met Met Leu Val Phe Gly Glu Met Thr Asp Ile Phe Ala  
 65                  70                  75                  80  
 Asn Ala Gly Asn Leu Glu Asp Leu Met Ser Asn Ile Thr Asn Arg Ser  
                   85                  90                  95  
 Asp Ile Asn Asp Thr Gly Phe Phe Met Asn Leu Glu Glu Asp Met Thr  
                   100                  105                  110  
 Arg Tyr Ala Tyr Tyr Tyr Ser Gly Ile Gly Ala Gly Val Leu Val Ala  
                   115                  120                  125  
 Ala Tyr Ile Gln Val Ser Phe Trp Cys Leu Ala Ala Gly Arg Gln Ile  
 130                  135                  140  
 His Lys Ile Arg Lys Gln Phe Phe His Ala Ile Met Arg Gln Glu Ile  
 145                  150                  155                  160  
 Gly Trp Phe Asp Val His Asp Val Gly Glu Leu Asn Thr Arg Leu Thr  
                   165                  170                  175  
 Asp Asp Val Ser Lys Ile Asn Glu Gly Ile Gly Asp Lys Ile Gly Met  
                   180                  185                  190  
 Phe Phe Gln Ser Met Ala Thr Phe Phe Thr Gly Phe Ile Val Gly Phe  
                   195                  200                  205  
 Thr Arg Gly Trp Lys Leu Thr Leu Val Ile Leu Ala Ile Ser Pro Val  
                   210                  215                  220  
 Leu Gly Leu Ser Ala Ala Val Trp Ala Lys Ile Leu Ser Ser Phe Thr  
 225                  230                  235                  240  
 Asp Lys Glu Leu Leu Ala Tyr Ala Lys Ala Gly Ala Val Ala Glu Glu  
                   245                  250                  255  
 Val Leu Ala Ala Ile Arg Thr Val Ile Ala Phe Gly Gly Gln Lys Lys  
                   260                  265                  270  
 Glu Leu Glu Arg Tyr Asn Lys Asn Leu Glu Glu Ala Lys Arg Ile Gly  
                   275                  280                  285  
 Ile Lys Lys Ala Ile Thr Ala Asn Ile Ser Ile Gly Ala Ala Phe Leu  
                   290                  295                  300  
 Leu Ile Tyr Ala Ser Tyr Ala Leu Ala Phe Trp Tyr Gly Thr Thr Leu  
 305                  310                  315                  320  
 Val Leu Ser Gly Glu Tyr Ser Ile Gly Gln Val Leu Thr Val Phe Phe  
                   325                  330                  335

Ser Val Leu Ile Gly Ala Phe Ser Val Gly Gln Ala Ser Pro Ser Ile  
 340 345 350  
 Glu Ala Phe Ala Asn Ala Arg Gly Ala Ala Tyr Glu Ile Phe Lys Ile  
 355 360 365  
 Ile Asp Asn Lys Pro Ser Ile Asp Ser Tyr Ser Lys Ser Gly His Lys  
 370 375 380  
 Pro Asp Asn Ile Lys Gly Asn Leu Glu Phe Arg Asn Val His Phe Ser  
 385 390 395 400  
 Tyr Pro Ser Arg Lys Glu Val Lys Ile Leu Lys Gly Leu Asn Leu Lys  
 405 410 415  
 Val Gln Ser Gly Gln Thr Val Ala Leu Val Gly Asn Ser Gly Cys Gly  
 420 425 430  
 Lys Ser Thr Thr Val Gln Leu Met Gln Arg Leu Tyr Asp Pro Thr Glu  
 435 440 445  
 Gly Met Val Ser Val Asp Gly Gln Asp Ile Arg Thr Ile Asn Val Arg  
 450 455 460  
 Phe Leu Arg Glu Ile Ile Gly Val Val Ser Gln Glu Pro Val Leu Phe  
 465 470 475 480  
 Ala Thr Thr Ile Ala Glu Asn Ile Arg Tyr Gly Arg Glu Asn Val Thr  
 485 490 495  
 Met Asp Glu Ile Glu Lys Ala Val Lys Glu Ala Asn Ala Tyr Asp Phe  
 500 505 510  
 Ile Met Lys Leu Pro His Lys Phe Asp Thr Leu Val Gly Glu Arg Gly  
 515 520 525  
 Ala Gln Leu Ser Gly Gly Gln Lys Gln Arg Ile Ala Ile Ala Arg Ala  
 530 535 540  
 Leu Val Arg Asn Pro Lys Ile Leu Leu Leu Asp Glu Ala Thr Ser Ala  
 545 550 555 560  
 Leu Asp Thr Glu Ser Glu Ala Val Val Gln Val Ala Leu Asp Lys Ala  
 565 570 575  
 Arg Lys Gly Arg Thr Thr Ile Val Ile Ala His Arg Leu Ser Thr Val  
 580 585 590  
 Arg Asn Ala Asp Val Ile Ala Gly Phe Asp Asp Gly Val Ile Val Glu  
 595 600 605  
 Lys Gly Asn His Asp Glu Leu Met Lys Glu Lys Gly Ile Tyr Phe Lys  
 610 615 620  
 Leu Val Thr Met Gln Thr Ala Gly Asn Glu Val Glu Leu Glu Asn Ala  
 625 630 635 640  
 Ala Asp Glu Ser Lys Ser Glu Ile Asp Ala Leu Glu Met Ser Ser Asn  
 645 650 655  
 Asp Ser Arg Ser Ser Leu Ile Arg Lys Arg Ser Thr Arg Arg Ser Val  
 660 665 670  
 Arg Gly Ser Gln Ala Gln Asp Arg Lys Leu Ser Thr Lys Glu Ala Leu  
 675 680 685  
 Asp Glu Ser Ile Pro Pro Val Ser Phe Trp Arg Ile Met Lys Leu Asn  
 690 695 700  
 Leu Thr Glu Trp Pro Tyr Phe Val Val Gly Val Phe Cys Ala Ile Ile  
 705 710 715 720  
 Asn Gly Gly Leu Gln Pro Ala Phe Ala Ile Ile Phe Ser Lys Ile Ile  
 725 730 735  
 Gly Val Phe Thr Arg Ile Asp Asp Pro Glu Thr Lys Arg Gln Asn Ser  
 740 745 750  
 Asn Leu Phe Ser Leu Leu Phe Leu Ala Leu Gly Ile Ile Ser Phe Ile  
 755 760 765

Thr Phe Phe Leu Gln Gly Phe Thr Phe Gly Lys Ala Gly Glu Ile Leu  
 770 775 780  
 Thr Lys Arg Leu Arg Tyr Met Val Phe Arg Ser Met Leu Arg Gln Asp  
 785 790 795 800  
 Val Ser Trp Phe Asp Asp Pro Lys Asn Thr Thr Gly Ala Leu Thr Thr  
 805 810 815  
 Arg Leu Ala Asn Asp Ala Ala Gln Val Lys Gly Ala Ile Gly Ser Arg  
 820 825 830  
 Leu Ala Val Ile Thr Gln Asn Ile Ala Asn Leu Gly Thr Gly Ile Ile  
 835 840 845  
 Ile Ser Phe Ile Tyr Gly Trp Gln Leu Thr Leu Leu Leu Ala Ile  
 850 855 860  
 Val Pro Ile Ile Ala Ile Ala Gly Val Val Glu Met Lys Met Leu Ser  
 865 870 875 880  
 Gly Gln Ala Leu Lys Asp Lys Lys Glu Leu Glu Gly Ala Gly Lys Ile  
 885 890 895  
 Ala Thr Glu Ala Ile Glu Asn Phe Arg Thr Val Val Ser Leu Thr Gln  
 900 905 910  
 Glu Gln Lys Phe Glu His Met Tyr Ala Gln Ser Leu Gln Val Pro Tyr  
 915 920 925  
 Arg Asn Ser Leu Arg Lys Ala His Ile Phe Gly Ile Thr Phe Ser Phe  
 930 935 940  
 Thr Gln Ala Met Met Tyr Phe Ser Tyr Ala Gly Cys Phe Arg Phe Gly  
 945 950 955 960  
 Ala Tyr Leu Val Ala His Lys Leu Met Ser Phe Glu Asp Val Leu Leu  
 965 970 975  
 Val Phe Ser Ala Val Val Phe Gly Ala Met Ala Val Gly Gln Val Ser  
 980 985 990  
 Ser Phe Ala Pro Asp Tyr Ala Lys Ala Lys Ile Ser Ala Ala His Ile  
 995 1000 1005  
 Ile Met Ile Ile Glu Lys Thr Pro Leu Ile Asp Ser Tyr Ser Thr Glu  
 1010 1015 1020  
 Gly Leu Met Pro Asn Thr Leu Glu Gly Asn Val Thr Phe Gly Glu Val  
 1025 1030 1035 1040  
 Val Phe Asn Tyr Pro Thr Arg Pro Asp Ile Pro Val Leu Gln Gly Leu  
 1045 1050 1055  
 Ser Leu Glu Val Lys Lys Gly Gln Thr Leu Ala Leu Val Gly Ser Ser  
 1060 1065 1070  
 Gly Cys Gly Lys Ser Thr Val Val Gln Leu Leu Glu Arg Phe Tyr Asp  
 1075 1080 1085  
 Pro Leu Ala Gly Lys Val Leu Leu Asp Gly Lys Glu Ile Lys Arg Leu  
 1090 1095 1100  
 Asn Val Gln Trp Leu Arg Ala His Leu Gly Ile Val Ser Gln Glu Pro  
 1105 1110 1115 1120  
 Ile Leu Phe Asp Cys Ser Ile Ala Glu Asn Ile Ala Tyr Gly Asp Asn  
 1125 1130 1135  
 Ser Arg Val Val Ser Gln Glu Glu Ile Val Arg Ala Ala Lys Glu Ala  
 1140 1145 1150  
 Asn Ile His Ala Phe Ile Glu Ser Leu Pro Asn Lys Tyr Ser Thr Lys  
 1155 1160 1165  
 Val Gly Asp Lys Gly Thr Gln Leu Ser Gly Gly Gln Lys Gln Arg Ile  
 1170 1175 1180  
 Ala Ile Ala Arg Ala Leu Val Arg Gln Pro His Ile Leu Leu Leu Asp  
 1185 1190 1195 1200

Glu Ala Thr Ser Ala Leu Asp Thr Glu Ser Glu Lys Val Val Gln Glu  
                   1205                  1210                  1215  
 Ala Leu Asp Lys Ala Arg Glu Gly Arg Thr Cys Ile Val Ile Ala His  
                   1220                  1225                  1230  
 Arg Leu Ser Thr Ile Gln Asn Ala Asp Leu Ile Val Val Phe Gln Asn  
                   1235                  1240                  1245  
 Gly Arg Val Lys Glu His Gly Thr His Gln Gln Leu Leu Ala Gln Lys  
                   1250                  1255                  1260  
 Gly Ile Tyr Phe Ser Met Val Ser Val Gln Ala Gly Thr Lys Arg Gln  
                   1265                  1270                  1275                  1280

<210> 8

<211> 2001

<212> PRT

<213> Homo sapiens

<220>

<221> VARIANT

<222> 30, 70, 280, 477, 558, 1471, 1651, 1689, 1724

<223> Xaa = Any Amino Acid

<221> VARIANT

<222> 30, 70, 280, 477, 558, 1471, 1651, 1689, 1724

<223> Xaa = Any Amino Acid

<400> 8

Met Ser Ser Leu Gly Phe Thr Ser Lys Glu Gln Arg Asn Leu Gly Leu  
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 Leu Val His Leu Met Thr Ser Asn Pro Lys Ile Leu Tyr Xaa Pro Ala  
                   20                  25                  30  
 Gly Ser Glu Val Asp Arg Val Ile Leu Lys Ala Asn Glu Thr Phe Ala  
                   35                  40                  45  
 Phe Val Gly Asn Val Thr His Tyr Ala Gln Val Trp Leu Asn Ile Ser  
                   50                  55                  60  
 Ala Glu Ile Arg Ser Xaa Leu Glu Gln Gly Arg Leu Gln Gln His Leu  
   65                  70                  75                  80  
 Arg Trp Leu Gln Gln Tyr Val Ala Glu Leu Arg Pro His Pro Glu Ala  
                   85                  90                  95  
 Leu Asn Leu Ser Leu Asp Glu Leu Pro Pro Ala Leu Arg Gln Asp Asn  
                   100                  105                  110  
 Phe Ser Leu Pro Ser Gly Met Ala Leu Leu Gln Gln Leu Asp Thr Ile  
                   115                  120                  125  
 Asp Asn Ala Pro Cys Gly Trp Ile Gln Phe Met Ser Lys Val Ser Val  
                   130                  135                  140  
 Asp Ile Phe Lys Gly Phe Pro Asp Glu Glu Ser Ile Val Asn Tyr Thr  
   145                  150                  155                  160  
 Leu Asn Gln Ala Tyr Gln Asp Asn Val Thr Val Phe Ala Gly Val Ile  
                   165                  170                  175  
 Phe Gln Thr Arg Lys Asp Gly Ser Leu Pro Pro His Val His Tyr Lys  
                   180                  185                  190  
 Ile Arg Gln Asn Ser Ser Phe Thr Glu Lys Thr Asn Glu Ile Arg Arg  
                   195                  200                  205  
 Ala Tyr Trp Arg Pro Gly Pro Asn Thr Gly Gly Arg Phe Tyr Phe Leu

210	215	220
Tyr Gly Phe Val Trp Ile Gln Asp Met Met Glu Arg Ala Ile Ile Asp		
225	230	235
Thr Phe Val Gly His Asp Val Val Glu Pro Gly Ser Tyr Val Gln Met		240
	245	250
Phe Pro Tyr Pro Cys Tyr Thr Arg Asp Asp Phe Leu Phe Val Ile Glu		255
	260	265
His Met Met Pro Leu Cys Met Xaa Ile Ser Trp Val Tyr Ser Val Ala		270
	275	280
Met Thr Ile Gln His Ile Val Ala Glu Lys Glu His Arg Leu Lys Glu		285
	290	295
Val Met Lys Thr Met Gly Leu Asn Asn Ala Val His Trp Val Ala Trp		300
305	310	315
Phe Ile Thr Gly Phe Val Gln Leu Ser Ile Ser Val Thr Ala Leu Thr		320
	325	330
Ala Ile Leu Lys Tyr Gly Gln Val Leu Met His Ser His Val Val Ile		335
	340	345
Ile Trp Leu Phe Leu Ala Val Tyr Ala Val Ala Thr Ile Met Phe Cys		350
	355	360
Phe Leu Val Ser Val Leu Tyr Ser Lys Ala Lys Leu Ala Ser Ala Gly		365
	370	375
Gly Ile Ile Tyr Phe Leu Ser Tyr Val Pro Tyr Met Tyr Val Ala Ile		380
385	390	395
Arg Glu Glu Val Ala His Asp Lys Ile Thr Ala Phe Glu Lys Cys Ile		400
	405	410
Ala Ser Leu Met Ser Thr Thr Ala Phe Gly Leu Gly Ser Lys Tyr Phe		415
	420	425
Ala Leu Tyr Glu Val Ala Gly Val Gly Ile Gln Trp His Thr Phe Ser		430
	435	440
Gln Ser Pro Val Glu Gly Asp Asp Phe Asn Leu Leu Leu Ala Val Thr		445
	450	455
Met Leu Met Val Asp Ala Val Val Tyr Gly Ile Leu Xaa Trp Tyr Ile		460
465	470	475
Glu Ala Val His Pro Gly Met Tyr Gly Leu Pro Arg Pro Trp Tyr Phe		480
	485	490
Pro Leu Gln Lys Ser Tyr Trp Leu Gly Ser Gly Arg Thr Glu Ala Trp		495
	500	505
Glu Trp Ser Trp Pro Trp Ala Arg Thr Pro Arg Leu Ser Val Met Glu		510
	515	520
Glu Asp Gln Ala Cys Ala Met Glu Ser Arg Arg Phe Glu Glu Thr Arg		525
	530	535
Gly Met Glu Glu Glu Pro Thr His Leu Pro Leu Val Val Xaa Val Asp		540
545	550	555
Lys Leu Thr Lys Val Tyr Lys Asp Asp Lys Lys Leu Ala Leu Asn Lys		560
	565	570
Leu Ser Leu Asn Leu Tyr Glu Asn Gln Gly Val Ser Phe Leu Gly His		575
	580	585
Asn Gly Ala Gly Lys Thr Thr Thr Met Ser Ile Leu Thr Gly Leu Phe		590
	595	600
Pro Pro Thr Ser Gly Ser Ala Thr Ile Tyr Gly His Asp Ile Arg Thr		605
	610	615
Glu Met Asp Glu Ile Arg Lys Asn Gly His Val Pro Gln His Asn Val		620
625	630	635
Leu Phe Asp Arg Leu Thr Val Glu Glu His Leu Trp Phe Tyr Ser Arg		640

					645					650					655
Leu	Lys	Ser	Met	Ala	Gln	Glu	Glu	Ile	Pro	Arg	Glu	Met	Asp	Lys	Met
			660					665					670		
Ile	Glu	Asp	Leu	Glu	Leu	Ser	Asn	Lys	Arg	His	Ser	Leu	Val	Gln	Thr
		675					680					685			
Leu	Ser	Gly	Gly	Met	Lys	Arg	Lys	Val	Ser	Val	Ala	Ile	Ala	Phe	Val
		690				695					700				
Gly	Gly	Ser	Arg	Ala	Ile	Ile	Leu	Asp	Glu	Pro	Thr	Ala	Gly	Val	Asp
705					710					715					720
Pro	Tyr	Ala	Arg	Arg	Ala	Ile	Trp	Asp	Leu	Ile	Leu	Lys	Tyr	Lys	Pro
				725					730						735
Gly	Arg	Thr	Ile	Leu	Leu	Ser	Thr	His	His	Met	Asp	Glu	Ala	Asp	Leu
			740					745					750		
Leu	Gly	Asp	Arg	Ile	Ala	Ile	Ile	Ser	His	Gly	Lys	Leu	Lys	Cys	Cys
		755					760					765			
Gly	Ser	Pro	Leu	Phe	Leu	Lys	Gly	Thr	Tyr	Gly	Asp	Gly	Tyr	Arg	Leu
		770				775					780				
Thr	Leu	Val	Lys	Arg	Pro	Ala	Glu	Pro	Gly	Gly	Pro	Gln	Glu	Pro	Gly
785					790					795					800
Leu	Ala	Ser	Ser	Pro	Pro	Gly	Arg	Ala	Pro	Leu	Ser	Ser	Cys	Ser	Glu
				805					810						815
Leu	Gln	Val	Ser	Gln	Phe	Ile	Arg	Lys	His	Val	Ala	Ser	Cys	Leu	Leu
			820					825					830		
Val	Ser	Asp	Thr	Ser	Thr	Glu	Leu	Ser	Tyr	Ile	Leu	Pro	Ser	Glu	Ala
		835					840					845			
Ala	Lys	Lys	Gly	Ala	Phe	Glu	Arg	Leu	Phe	Gln	His	Leu	Glu	Arg	Ser
		850				855					860				
Leu	Asp	Ala	Leu	His	Leu	Ser	Ser	Phe	Gly	Leu	Met	Asp	Thr	Thr	Leu
865					870					875					880
Glu	Glu	Val	Phe	Leu	Lys	Val	Ser	Gly	Gly	Asp	Gln	Ser	Leu	Glu	Asn
				885					890						895
Ser	Gly	Ala	Asp	Val	Lys	Glu	Ser	Arg	Lys	Asp	Val	Leu	Pro	Gly	Ala
			900					905					910		
Glu	Gly	His	Ala	Ser	Gly	Glu	Gly	His	Ala	Gly	Asn	Leu	Ala	Arg	Cys
		915					920					925			
Ser	Glu	Leu	Thr	Gln	Ser	Gln	Ala	Ser	Leu	Gln	Ser	Ala	Ser	Ser	Val
						935					940				
Gly	Ser	Ala	Leu	Gly	Asp	Glu	Gly	Ala	Gly	Tyr	Thr	Asp	Val	Tyr	Gly
945					950					955					960
Asp	Tyr	Pro	Pro	Leu	Phe	Asp	Asn	Pro	Gln	Asp	Pro	Asp	Asn	Val	Ser
				965					970						975
Leu	Gln	Glu	Val	Glu	Ala	Glu	Ala	Leu	Ser	Arg	Val	Gly	Gln	Gly	Ser
			980					985					990		
Arg	Lys	Leu	Asp	Gly	Gly	Trp	Leu	Lys	Val	Arg	Gln	Phe	His	Gly	Leu
		995													

1075	1080	1085
Ala Ser Pro Gln Gln Leu Val Ser Thr Phe Arg Leu Pro Ser Gly Val		
1090	1095	1100
Gly Ala Thr Cys Val Leu Lys Ser Pro Ala Asn Gly Ser Leu Gly Pro		
1105	1110	1115
Thr Leu Asn Leu Ser Ser Gly Glu Ser Arg Leu Leu Ala Ala Arg Phe		
1125	1130	1135
Phe Asp Ser Met Cys Leu Glu Ser Phe Thr Gln Gly Leu Pro Leu Ser		
1140	1145	1150
Asn Phe Val Pro Pro Pro Pro Ser Pro Ala Pro Ser Asp Ser Pro Ala		
1155	1160	1165
Ser Pro Asp Glu Asp Leu Gln Ala Trp Asn Val Ser Leu Pro Pro Thr		
1170	1175	1180
Ala Gly Gln Glu Met Trp Thr Ser Ala Pro Ser Leu Pro Arg Leu Val		
1185	1190	1195
Arg Glu Pro Val Arg Cys Thr Cys Ser Ala Gln Gly Thr Gly Phe Ser		
1205	1210	1215
Cys Pro Asn Ser Val Gly Gly His Pro Pro Gln Met Arg Val Val Thr		
1220	1225	1230
Gly Asp Ile Leu Thr Asp Ile Thr Gly His Asn Val Ser Glu Tyr Leu		
1235	1240	1245
Leu Phe Thr Ser Asp Arg Phe Arg Leu His Arg Tyr Gly Ala Ile Thr		
1250	1255	1260
Phe Gly Asn Val Leu Lys Ser Ile Pro Ala Ser Phe Gly Thr Arg Ala		
1265	1270	1275
Pro Pro Met Val Arg Lys Ile Arg Cys Ala Arg Ala Ala Gln Val Phe		
1285	1290	1295
Tyr Asn Asn Lys Gly Tyr His Ser Met Pro Thr Tyr Leu Asn Ser Leu		
1300	1305	1310
Asn Asn Ala Ile Leu Arg Ala Asn Leu Pro Lys Ser Lys Gly Asn Pro		
1315	1320	1325
Ala Ala Tyr Gly Ile Thr Val Thr Asn His Pro Met Asn Lys Thr Ser		
1330	1335	1340
Ala Ser Leu Ser Leu Asp Tyr Leu Leu Gln Gly Thr Asp Val Val Ile		
1345	1350	1355
Ala Ile Phe Ile Ile Val Ala Met Ser Phe Val Pro Ala Ser Phe Val		
1365	1370	1375
Val Phe Leu Val Ala Glu Lys Ser Thr Lys Ala Lys His Leu Gln Phe		
1380	1385	1390
Val Ser Gly Cys Asn Pro Ile Ile Tyr Trp Leu Ala Asn Tyr Val Trp		
1395	1400	1405
Asp Met Leu Asn Tyr Leu Val Pro Ala Thr Cys Cys Val Ile Ile Leu		
1410	1415	1420
Phe Val Phe Asp Leu Pro Ala Tyr Thr Ser Pro Thr Asn Phe Pro Ala		
1425	1430	1435
Val Leu Ser Leu Phe Leu Leu Tyr Gly Trp Ser Ile Thr Pro Ile Met		
1445	1450	1455
Tyr Pro Ala Ser Phe Trp Phe Glu Val Pro Ser Ser Ala Tyr Xaa Phe		
1460	1465	1470
Leu Ile Val Ile Asn Leu Phe Ile Gly Ile Thr Ala Thr Val Ala Thr		
1475	1480	1485
Phe Leu Leu Gln Leu Phe Glu His Asp Lys Asp Leu Lys Val Val Asn		
1490	1495	1500
Ser Tyr Leu Lys Ser Cys Phe Leu Ile Phe Pro Asn Tyr Asn Leu Gly		

1505                      1510                      1515                      1520  
 His Gly Leu Met Glu Met Ala Tyr Asn Glu Tyr Ile Asn Glu Tyr Tyr  
                                  1525                      1530                      1535  
 Ala Lys Ile Gly Gln Phe Asp Lys Met Lys Ser Pro Phe Glu Trp Asp  
                                  1540                      1545                      1550  
 Ile Val Thr Arg Gly Leu Val Ala Met Ala Val Glu Gly Val Val Gly  
                                  1555                      1560                      1565  
 Phe Leu Leu Thr Ile Met Cys Gln Tyr Asn Phe Leu Arg Arg Pro Gln  
                                  1570                      1575                      1580  
 Arg Met Pro Val Ser Thr Lys Pro Val Glu Asp Asp Val Asp Val Ala  
 1585                      1590                      1595                      1600  
 Ser Glu Arg Gln Arg Val Leu Arg Gly Asp Ala Asp Asn Asp Met Val  
                                  1605                      1610                      1615  
 Lys Ile Glu Asn Leu Thr Lys Val Tyr Lys Ser Arg Lys Ile Gly Arg  
                                  1620                      1625                      1630  
 Ile Leu Ala Val Asp Arg Leu Cys Leu Gly Val Arg Pro Gly Glu Cys  
                                  1635                      1640                      1645  
 Phe Gly Xaa Leu Gly Val Asn Gly Ala Gly Lys Thr Ser Thr Phe Lys  
                                  1650                      1655                      1660  
 Met Leu Thr Gly Asp Glu Ser Thr Thr Gly Gly Glu Ala Phe Val Asn  
 1665                      1670                      1675                      1680  
 Gly His Ser Val Leu Lys Glu Leu Xaa Gln Val Gln Gln Ser Leu Gly  
                                  1685                      1690                      1695  
 Tyr Cys Pro Gln Cys Asp Ala Leu Phe Asp Glu Leu Thr Ala Arg Glu  
                                  1700                      1705                      1710  
 His Leu Gln Leu Tyr Thr Arg Leu Arg Gly Ile Xaa Trp Lys Asp Glu  
                                  1715                      1720                      1725  
 Ala Arg Val Val Lys Trp Ala Leu Glu Lys Leu Glu Leu Thr Lys Tyr  
                                  1730                      1735                      1740  
 Ala Asp Lys Pro Ala Gly Thr Tyr Ser Gly Gly Asn Lys Arg Lys Leu  
 1745                      1750                      1755                      1760  
 Ser Thr Ala Ile Ala Leu Ile Gly Tyr Pro Ala Phe Ile Phe Leu Asp  
                                  1765                      1770                      1775  
 Glu Pro Thr Thr Gly Met Asp Pro Lys Ala Arg Arg Phe Leu Trp Asn  
                                  1780                      1785                      1790  
 Leu Ile Leu Asp Leu Ile Lys Thr Gly Arg Ser Val Val Leu Thr Ser  
                                  1795                      1800                      1805  
 His Ser Met Glu Glu Cys Glu Ala Leu Cys Thr Arg Leu Ala Ile Met  
                                  1810                      1815                      1820  
 Val Asn Gly Arg Leu Arg Cys Leu Gly Ser Ile Gln His Leu Lys Asn  
 1825                      1830                      1835                      1840  
 Arg Phe Gly Asp Gly Tyr Met Ile Thr Val Arg Thr Lys Ser Ser Gln  
                                  1845                      1850                      1855  
 Ser Val Lys Asp Val Val Arg Phe Phe Asn Arg Asn Phe Pro Glu Ala  
                                  1860                      1865                      1870  
 Met Leu Lys Glu Arg His His Thr Lys Val Gln Tyr Gln Leu Lys Ser  
                                  1875                      1880                      1885  
 Glu His Ile Ser Leu Ala Gln Val Phe Ser Lys Met Glu Gln Val Ser  
                                  1890                      1895                      1900  
 Gly Val Leu Gly Ile Glu Asp Tyr Ser Val Ser Gln Thr Thr Leu Asp  
 1905                      1910                      1915                      1920  
 Asn Val Phe Val Asn Phe Ala Lys Lys Gln Ser Asp Asn Leu Glu Gln  
                                  1925                      1930                      1935  
 Gln Glu Thr Glu Pro Pro Ser Ala Leu Gln Ser Pro Leu Gly Cys Leu

1940	1945	1950
Leu Ser Leu Leu Arg Pro Arg Ser Ala Pro Thr Glu Leu Arg Ala Leu		
1955	1960	1965
Val Ala Asp Glu Pro Glu Asp Leu Asp Thr Glu Asp Glu Gly Leu Ile		
1970	1975	1980
Ser Phe Glu Glu Glu Arg Ala Gln Leu Ser Phe Asn Thr Asp Thr Leu		
1985	1990	1995
Cys		2000

<210> 9  
 <211> 646  
 <212> PRT  
 <213> Homo sapiens

<400> 9

Met	Ala	Glu	Lys	Ala	Leu	Glu	Ala	Val	Gly	Cys	Gly	Leu	Gly	Pro	Gly
1			5						10					15	
Ala	Val	Ala	Met	Ala	Val	Thr	Leu	Glu	Asp	Gly	Ala	Glu	Pro	Pro	Val
		20						25					30		
Leu	Thr	Thr	His	Leu	Lys	Lys	Val	Glu	Asn	His	Ile	Thr	Glu	Ala	Gln
		35					40					45			
Arg	Phe	Ser	His	Leu	Pro	Lys	Arg	Ser	Ala	Val	Asp	Ile	Glu	Phe	Val
	50					55					60				
Glu	Leu	Ser	Tyr	Ser	Val	Arg	Glu	Gly	Pro	Cys	Trp	Arg	Lys	Arg	Gly
65					70					75					80
Tyr	Lys	Thr	Leu	Leu	Lys	Cys	Leu	Ser	Gly	Lys	Phe	Cys	Arg	Arg	Glu
			85						90					95	
Leu	Ile	Gly	Ile	Met	Gly	Pro	Ser	Gly	Ala	Gly	Lys	Ser	Thr	Phe	Met
			100					105					110		
Asn	Ile	Leu	Ala	Gly	Tyr	Arg	Glu	Ser	Gly	Met	Lys	Gly	Gln	Ile	Leu
		115					120					125			
Val	Asn	Gly	Arg	Pro	Arg	Glu	Leu	Arg	Thr	Phe	Arg	Lys	Met	Ser	Cys
	130					135					140				
Tyr	Ile	Met	Gln	Asp	Asp	Met	Leu	Leu	Pro	His	Leu	Thr	Val	Leu	Glu
145					150					155					160
Ala	Met	Met	Val	Ser	Ala	Asn	Leu	Asn	Leu	Thr	Glu	Asn	Pro	Asp	Val
			165					170						175	
Lys	Asn	Asp	Leu	Val	Thr	Glu	Ile	Leu	Thr	Ala	Leu	Gly	Leu	Met	Ser
		180						185					190		
Cys	Ser	His	Thr	Arg	Thr	Ala	Leu	Leu	Ser	Gly	Gly	Gln	Arg	Lys	Arg
		195					200					205			
Leu	Ala	Ile	Ala	Leu	Glu	Leu	Val	Asn	Asn	Pro	Pro	Val	Met	Phe	Phe
	210					215					220				
Asp	Glu	Pro	Thr	Ser	Gly	Leu	Asp	Ser	Ala	Ser	Cys	Phe	Gln	Val	Val
225					230					235					240
Ser	Leu	Met	Lys	Ser	Leu	Ala	Gln	Gly	Gly	Arg	Thr	Ile	Ile	Cys	Thr
			245						250					255	
Ile	His	Gln	Pro	Ser	Ala	Lys	Leu	Phe	Glu	Met	Phe	Asp	Lys	Leu	Tyr
			260					265					270		
Ile	Leu	Ser	Gln	Gly	Gln	Cys	Ile	Phe	Lys	Gly	Val	Val	Thr	Asn	Leu
	275						280					285			
Ile	Pro	Tyr	Leu	Lys	Gly	Leu	Gly	Leu	His	Cys	Pro	Thr	Tyr	His	Asn

290		295		300											
Pro	Ala	Asp	Phe	Ile	Ile	Glu	Val	Ala	Ser	Gly	Glu	Tyr	Gly	Asp	Leu
305				310						315					320
Asn	Pro	Met	Leu	Phe	Arg	Ala	Val	Gln	Asn	Gly	Leu	Cys	Ala	Met	Ala
			325						330					335	
Glu	Lys	Lys	Ser	Ser	Pro	Glu	Lys	Asn	Glu	Val	Pro	Ala	Pro	Cys	Pro
			340					345					350		
Pro	Cys	Pro	Pro	Glu	Val	Asp	Pro	Ile	Glu	Ser	His	Thr	Phe	Ala	Thr
		355				360						365			
Ser	Thr	Leu	Thr	Gln	Phe	Cys	Ile	Leu	Phe	Lys	Arg	Thr	Phe	Leu	Ser
370					375						380				
Ile	Leu	Arg	Asp	Thr	Val	Leu	Thr	His	Leu	Arg	Phe	Met	Ser	His	Val
385				390						395					400
Val	Ile	Gly	Val	Leu	Ile	Gly	Leu	Leu	Tyr	Leu	His	Ile	Gly	Asp	Asp
			405						410					415	
Ala	Ser	Lys	Val	Phe	Asn	Asn	Thr	Gly	Cys	Leu	Phe	Phe	Ser	Met	Leu
			420					425					430		
Phe	Leu	Met	Phe	Ala	Ala	Leu	Met	Pro	Thr	Val	Leu	Thr	Phe	Pro	Leu
		435					440					445			
Glu	Met	Ala	Val	Phe	Met	Arg	Glu	His	Leu	Asn	Tyr	Trp	Tyr	Ser	Leu
450					455						460				
Lys	Ala	Tyr	Tyr	Leu	Ala	Lys	Thr	Met	Ala	Asp	Val	Pro	Phe	Gln	Val
465				470						475					480
Val	Cys	Pro	Val	Val	Tyr	Cys	Ser	Ile	Val	Tyr	Trp	Met	Thr	Gly	Gln
			485						490					495	
Pro	Ala	Glu	Thr	Ser	Arg	Phe	Leu	Leu	Phe	Ser	Ala	Leu	Ala	Thr	Ala
		500						505					510		
Thr	Ala	Leu	Val	Ala	Gln	Ser	Leu	Gly	Leu	Leu	Ile	Gly	Ala	Ala	Ser
		515					520					525			
Asn	Ser	Leu	Gln	Val	Ala	Thr	Phe	Val	Gly	Pro	Val	Thr	Ala	Ile	Pro
530					535						540				
Val	Leu	Leu	Phe	Ser	Gly	Phe	Phe	Val	Ser	Phe	Lys	Thr	Ile	Pro	Thr
545				550						555					560
Tyr	Leu	Gln	Trp	Ser	Ser	Tyr	Leu	Ser	Tyr	Val	Arg	Tyr	Gly	Phe	Glu
			565						570					575	
Gly	Val	Ile	Leu	Thr	Ile	Tyr	Gly	Met	Glu	Arg	Gly	Asp	Leu	Thr	Cys
		580					585					590			
Leu	Glu	Glu	Arg	Cys	Pro	Phe	Arg	Glu	Pro	Gln	Ser	Ile	Leu	Arg	Ala
		595					600					605			
Leu	Asp	Val	Glu	Asp	Ala	Lys	Leu	Tyr	Met	Asp	Phe	Leu	Val	Leu	Gly
610					615					620					
Ile	Phe	Phe	Leu	Ala	Leu	Arg	Leu	Leu	Ala	Tyr	Leu	Val	Leu	Arg	Tyr
625				630						635					640
Arg	Val	Lys	Ser	Glu	Arg										
			645												

&lt;210&gt; 10

&lt;211&gt; 638

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 10

Met Glu Ala Thr Glu Thr Asp Leu Leu Asn Gly His Leu Lys Lys Val

1	5	10	15
Asp Asn Asn Leu Thr Glu Ala Gln Arg Phe Ser Ser Leu Pro Arg Arg			
20	25	30	
Ala Ala Val Asn Ile Glu Phe Arg Asp Leu Ser Tyr Ser Val Pro Glu			
35	40	45	
Gly Pro Trp Trp Arg Lys Lys Gly Tyr Lys Thr Leu Leu Lys Gly Ile			
50	55	60	
Ser Gly Lys Phe Asn Ser Gly Glu Leu Val Ala Ile Met Gly Pro Ser			
65	70	75	80
Gly Ala Gly Lys Ser Thr Leu Met Asn Ile Leu Ala Gly Tyr Arg Glu			
85	90	95	
Thr Gly Met Lys Gly Ala Val Leu Ile Asn Gly Leu Pro Arg Asp Leu			
100	105	110	
Arg Cys Phe Arg Lys Val Ser Cys Tyr Ile Met Gln Asp Asp Met Leu			
115	120	125	
Leu Pro His Leu Thr Val Gln Glu Ala Met Met Val Ser Ala His Leu			
130	135	140	
Lys Leu Gln Glu Lys Asp Glu Gly Arg Arg Glu Met Val Lys Glu Ile			
145	150	155	160
Leu Thr Ala Leu Gly Leu Leu Ser Cys Ala Asn Thr Arg Thr Gly Ser			
165	170	175	
Leu Ser Gly Gly Gln Arg Lys Arg Leu Ala Ile Ala Leu Glu Leu Val			
180	185	190	
Asn Asn Pro Pro Val Met Phe Phe Asp Glu Pro Thr Ser Gly Leu Asp			
195	200	205	
Ser Ala Ser Cys Phe Gln Val Val Ser Leu Met Lys Gly Leu Ala Gln			
210	215	220	
Gly Gly Arg Ser Ile Ile Cys Thr Ile His Gln Pro Ser Ala Lys Leu			
225	230	235	240
Phe Glu Leu Phe Asp Gln Leu Tyr Val Leu Ser Gln Gly Gln Cys Val			
245	250	255	
Tyr Arg Gly Lys Val Cys Asn Leu Val Pro Tyr Leu Arg Asp Leu Gly			
260	265	270	
Leu Asn Cys Pro Thr Tyr His Asn Pro Ala Asp Phe Val Met Glu Val			
275	280	285	
Ala Ser Gly Glu Tyr Gly Asp Gln Asn Ser Arg Leu Val Arg Ala Val			
290	295	300	
Arg Glu Gly Met Cys Asp Ser Asp His Lys Arg Asp Leu Gly Gly Asp			
305	310	315	320
Ala Glu Val Asn Pro Phe Leu Trp His Arg Pro Ser Glu Glu Val Lys			
325	330	335	
Gln Thr Lys Arg Leu Lys Gly Leu Arg Lys Asp Ser Ser Ser Met Glu			
340	345	350	
Gly Cys His Ser Phe Ser Ala Ser Cys Leu Thr Gln Phe Cys Ile Leu			
355	360	365	
Phe Lys Arg Thr Phe Leu Ser Ile Met Arg Asp Ser Val Leu Thr His			
370	375	380	
Leu Arg Ile Thr Ser His Ile Gly Ile Gly Leu Leu Ile Gly Leu Leu			
385	390	395	400
Tyr Leu Gly Ile Gly Asn Glu Ala Lys Lys Val Leu Ser Asn Ser Gly			
405	410	415	
Phe Leu Phe Phe Ser Met Leu Phe Leu Met Phe Ala Ala Leu Met Pro			
420	425	430	
Thr Val Leu Thr Phe Pro Leu Glu Met Gly Val Phe Leu Arg Glu His			

435	440	445
Leu Asn Tyr Trp Tyr Ser Leu Lys Ala Tyr Tyr Leu Ala Lys Thr Met		
450	455	460
Ala Asp Val Pro Phe Gln Ile Met Phe Pro Val Ala Tyr Cys Ser Ile		
465	470	475
Val Tyr Trp Met Thr Ser Gln Pro Ser Asp Ala Val Ala Phe Val Leu		480
	485	490
Phe Ala Ala Leu Gly Thr Met Thr Ser Leu Val Ala Gln Ser Leu Gly		495
	500	505
Leu Leu Ile Gly Ala Ala Ser Thr Ser Leu Gln Val Ala Thr Phe Val		510
	515	520
Gly Pro Val Thr Ala Ile Pro Val Leu Leu Phe Ser Gly Phe Phe Val		525
	530	535
Ser Phe Asp Thr Ile Pro Thr Tyr Leu Gln Trp Met Ser Tyr Ile Ser		540
545	550	555
Tyr Val Arg Tyr Gly Phe Glu Gly Val Ile Leu Ser Ile Tyr Gly Leu		560
	565	570
Asp Arg Glu Asp Leu His Cys Asp Ile Asp Glu Thr Cys His Phe Gln		575
	580	585
Lys Ser Glu Ala Ile Leu Arg Glu Leu Asp Val Glu Asn Ala Lys Leu		590
	595	600
Tyr Leu Asp Phe Ile Val Leu Gly Ile Phe Phe Ile Ser Leu Arg Leu		605
	610	615
Ile Ala Tyr Phe Val Leu Arg Tyr Lys Ile Arg Ala Glu Arg		620
625	630	635